April 27, 2018

EX PARTE FILING

VIA ELECTRONIC FILING
Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: *Ex Parte Presentation*, RM-11780 and PS Docket No. 07-114

Dear Ms. Dortch:

On April 25, 2018, representatives of AVAYA and BETA 80 International met with representatives of the FCC's Public Safety & Homeland Security Bureau (Bureau)[1] to discuss the evolution of the existing architecture and capabilities currently being used in the United States, to provide and allow additional data from intelligent endpoints and contributory networks and any associated devices in a secure ecosystem related to 9-1-1 calls. Our meeting was in response to an *Ex Parte* filing made on April 4, 2018[2] by representatives of APCO, NENA, CTIA and their member companies. These organizations and companies urged the Commission to "issue guidance to ensure that such solutions including, "ALI routing information and other data relevant to Public Safety Answering Points (PSAPs)" take appropriate steps to "provide reasonable notice to the FCC, appropriate state or local public safety authorities, and wireless providers operating within the area of testing, trialing or use of 9-1-1 apps or supplemental data solutions that may impact live 9-1-1 calls…and…disclose their testing methodology." The stated reason for this requested expansion of the Commission's regulatory reach into the 9-1-1 sector was to "[T]o maintain the integrity, reliability and resiliency of the evolving 9-1-1 system" according to APCO, NENA, CTIA and their member companies.

The proposal advanced by APCO, NENA, CTIA and their member companies to significantly expand the Commission's regulatory reach raises several concerns. First, the proposal would solidify mobile operators and their collaborator organizations as the effective market gatekeepers for the development of 9-1-1 technologies. Whether this proposal is advanced through regulation or by sanction, it would certainly thwart and hinder innovation from independent developers that seek to generate significant advances to improve 9-1-1 location services. Second, the proposal calls for an extension of regulation to cover the operations of PSAPs and and any innovative technology development seeking to enhance the effectiveness of 9-1-1 services. None of these entities are currently regulated by the Commission therefore we

[1] Appendix I
[2] Appendix II

believe that any regulatory expansion would be illegal and certiainly have a serious negative impact on the 9-1-1 market.

The additional claim that 9-1-1 location innovation and apps designed to improve the ability of PSAPs to respond to emergencies poses security and resiliency issues for 9-1-1 is unsubstantiated and would likely thwart innovation from independent sources. Adopting this proposal would make the Commission a constraining force that would impede 9-1-1 innovation and transfer market control of 9-1-1 services to the discretion of mobile operators and any organization under their control and impede advances to improve public safety communications.

In addition to the imposition of a chilling effect on not only independently the development of E9-1-1 solutions but NG 9-1-1 technology innovation and deployment as well.

The security concern used to justify the proposed major expansion of regulatory reach by the Commission in this area has no basis or foundation either logically or in practice, and ignores common best practices employeed by governments today as they move to hybrid cloud environments. Any field testing or market trial on any technology that would involve 9-1-1 service must, by default, be conducted with the cooperation of a PSAP who is in the best position to judge and address the risk to its operations. As industry evolves and engages in the development of new and commercially available innovative location 9-1-1 technology and related data services, including NG 9-1-1 solutions, we make security and the protection of the public safety network a paramount part of our development. No desire or incentive to allow any rogue applications that attempt to inject harmful traffic while originating emergency 9-1-1 session requests exists today or in the future. Our motive is to enhance 9-1-1 service by developing and deploying new and innovative solutions that have the goal of enhahncing and preserve security. We completely agree to, and would adhere to any testing we would be required to conduct and perform that due dilligence in close coordination and under the compliance of a PSAP's security protocols. PSAPs and innovators like us do not need more Commission regulation to protect security and resiliency of 9-1-1 services.

APCO, NENA, CTIA and their member companies suggested that "supplemental data solutions can offer Automatic Location Information (ALI[3])" related to recent circumstances raised concerns that supported their regulatory expansion. This is a case in point that accentuates the lack of understanding by these parties as they referenced the recent tragic events in both

[3] The NENA Master Glossary, currently available online at https://www.nena.org/resource/resmgr/standards/NENA-ADM-000.22-2018_FINAL_2.pdf defines the term *"Automatic Location Information (ALI)"* as, "The automatic display at the PSAP of the caller's telephone number, the address/location of the telephone and supplementary emergency services information of the location from which a call originates."

Jupiter, Florida[4] and Cincinnati, Ohio[5], clearly the precise "address/location of the telephone" which were not produced by the wireless carrier network. These situations have no relevance to the argument they are making for the Commission to grant greater market control over innovation by the mobile operators through imposing a new expansive regulation.

In fact, the claim made by APCO, NENA, CTIA and their member companies that "other data relevant to Public Safety Answering Points (PSAPs) for a wireless 9-1-1 call" is, or even can be sent to the PSAP, is merely a fantasy and a misnomer is misleading. To send any relevant information the network would have to collect the information, and in each tragic case noted, neither occurred.

UBER can find me, but 9-1-1 cannot. This is what happens when the mobile industry, with the acquiescence of APCO and NENA, control all the solutions for location services and NG 9-1-1 solutions. The interests of public safety require a place for independent innovators to explore solutions that the mobile operators are not willing to explore. AML (Advanced Mobile Location), for example, was developed in Europe as a means to find a better location solution than what the mobile operator was otherwise providing for emergency calls. While British Telecom cooperated in the AML development, the whole purpose of developing the AML solution (developed by Google on the Android operating system) was to provide PSAPs with an option to enhance caller location on emergency calls where the location data provided by the mobile operators was missing or was inadequate for the intended purpose. AML has been deployed in 10 European countries without any of the problems suggested by APCO, NENA, CTIA, and their member companies. Recently, testing in the U.S. was conducted by Rapid SOS with the cooperation of PSAPs and it was clearly demonstrated that AML provided location data that was (a) delivered to the PSAP faster and (b) had greater accuracy confidence when compared to the location data provided by the mobile operator to the PSAP.[6]

The current ANI/ALI architecture was designed for fixed location, non-nomadic legacy telephony solutions. While this technology works well for it's intended purpose, it was not built with the intention to accommodate dynamic location discovery and reporting by intelligent endpoints. These systems operate under the general premise that each endpoint capable of originating an emergency call event has a unique calling line identifier or telephone number, and that the location of the device remains constant once it has been installed and placed into service.

Current and future technologies have evolved with intelligent endpoints, capable of location awareness through additional connectivity to a whole host of location-based services openly

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[4] WPTV Channel 5, last accessed April 15, 2018 at https://www.wptv.com/news/region-n-palm-beach-county/jupiter/man-pulled-from-the-ocean-dies-in-jupiter

[5] CNN, last accessed April 15, 2018 at https://www.cnn.com/2018/04/12/us/ohio-teen-pinned-minivan-trnd/index.html

[6] Rapid SOS "*NG911 Clearinghouse Android ELS Pilot Project: Testing the Impact of Delivering Android Emergency Location Service (ELS) to PASPs in the U.S. via the Rapid SOS NG911 Clearinghouse*," January 2018 (http://info.rapidsos.com/els).

available. This underscores the need to allow for innovation and allow technology to emerge from those parties that are innovating in that space without the constraint of a new regulatory structure or subservience to existing mobile operators, as these entities have become merely the transport and not the intelligence.

While carriers in the past were in control of location data, private and enterprise networks now hold that information. Further, citizens have come to use this technology on a daily basis and citizens understand the juxtaposition and irony that consumer services such as ride sharing (Uber and Lyft) and food delivery services (Dominos) provide better location service than 9-1-1[7]. In addition, public beacons exist allowing geo positioning and geo-fencing technologies provide location awareness to buildings internal environmental data.

In commercial environments, the addition of relevant and precise location information, along with mechanisms for passing that information as well as additional data, is one that was solved almost immediately after the introduction of the Smartphone. Using Smartphone and internet technology, data can be correlated with the communication flow to PSAPs and provide a more precise and appropriate response by first responders and equipment. Making this level of detail available to PSAPs is crucial in the effort to enhahnce and ultimately supplant the need for existing Automatic Location Information (ALI) available today, as well as provide additional routing information and guidance, as well as other valuable data points for a variety of communications sessions including, but not limited to wireless, wireline, MLTS and Over the Top applications on IP connected smart devices.

We encouraged the Commission to reject the proposal by APCO, NENA, CTIA, and their member companies to expand the Commission's regulatory reach over these and other independently developed 9-1-1 services. We advocated that the Commission instead permit a pro-innovation environment to exist and allow the development of apps, location services, and other related data services that would enhance the 9-1-1 response system to foster and operate without interference or be placed under the control of the mobile operators with the blessing of a burdensome new government regulation.

We also discussed issues raised by APCO, NENA, CTIA and their member companies on the conduct of market trials such as providing notification to mobile operators that testing is going to occur and being transparent with testing methods and results. We agreed that as a matter of practice, it is beneficial for any PSAP involved in such testing provide any necessary notification to mobile operators if there is any chance that such testing could impact 9-1-1 calls in any way. It would also be beneficial for PSAPs to be transparent on any tests it conducts on 9-1-1 calls or any data related to 9-1-1 calls. This transparency should apply not only to any independent technology providers but to any testing and evaluation conducted to assess the

[7] Network World, *"Why cellular 911 has location problems"*, https://www.networkworld.com/article/3073563/mobile-wireless/why-cellular-911-has-location-problems.html, last accessed April 27, 2018

performance of the mobile operators to comply with existing caller location requirements. Our position is that these matters are outside of the regulatory reach of the Commission and such practices are a matter for individual PSAPs to determine as a means of conducting trials using best practices and consulting with all affected parties, just as they would test any other technology advancement. There may also be merit for a broader dialogue and coordination among developers, carriers, and public safety agencies to examine best practices. However, these discussions do not fall under the Commission's authority.

The Commission's regulatory reach over 9-1-1 relates to its exclusive jurisdiction to regulate the mobile wireless carriers. The Commission does not have the authority to regulate PSAPs and there is no reason why the Commission needs to extend regulation over PSAPs or independent developers. If the Commission were to assert such regulatory reach as suggested by APCO, NENA, CTIA and their member companies, it would certainly be exceeding its regulatory authority granted under the Communications Act and therefore be subject to legal challenge. The Commission, therefore, has no reason or legal basis to control PSAP operations, including testing protocols, or independent developers of apps or other software solutions that seek to improve 9-1-1 service. If a PSAP wants to explore a new innovative solution that would improve its operations, it should be allowed to do so. This is the case today and the Commission should not attempt to alter this situation in order to provide mobile operators with more control over 9-1-1 apps, location services, or other enhancements that would improve 9-1-1 services.

Any action by the Commission, either through regulation or sanction would have a chilling effect on technology innovation and the development of E9-1-1 and NG9-1-1 solutions. While the event that prompted the proposal for new 9-1-1 regulation by APCO, NENA, CTIA and their member companies was recent testing of one particular handset based solution, the proposal would effect a wide range of current and future development. The proposal's aspect that testing methodologies must be shared with mobile operators would effective require developers, including companies such as Google and Apple, to be forced to relinquish the Intellectual Property of their technologies. It is not appropriate for a federal regulatory agency to force innovative developers to surrender their intellectual property to the mobile industry and their organization collaborators and sanction them as gatekeepers for 9-1-1 innovation.

The mobile operators do not need more control over services provided by independent innovators as requested under the proposal. Innovative solutions that improve location technology and other data services that can better assist PSAPs and first responders to address emergencies currently exist in a non-regulated environment and should remain so. Coordination with mobile operators and transparency of testing are matters that should be left to the voluntary cooperation between 9-1-1 stakeholders not regulated by the Commission.

We urged the Commission not to impose a new regulation that would disrupt 9-1-1 innovation and to subject these efforts to a burdensome new regulatory regime that would require disclosure of intellectual property and approval of the mobile operators and potential interference of organizations such as APCO, NENA, and CTIA and their member companies.

Respectfully submitted,

/S/ Mr. Mark J. Fletcher, ENP
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AVAYA Holdings Corp.

/S/ Gregory Rohde
General Manager
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[APPENDIX A – April XX Meeting participants]
‘*’ designates attendance via teleconference

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David L. Furth, Deputy Chief, Public Safety and Homeland Security Bureau (PSHSB)
Erika Olsen, Senior Counsel, PSHSB*
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